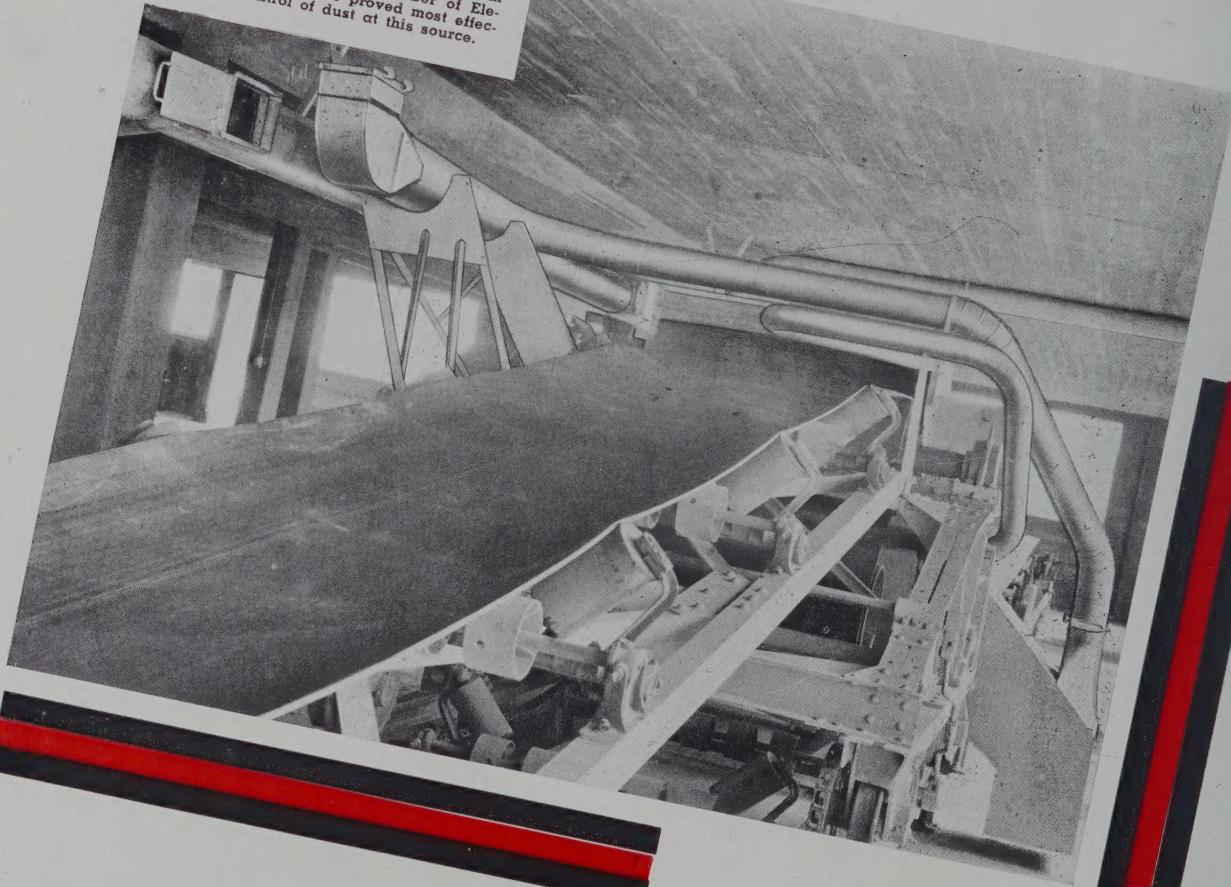




Gran

OCTOBER, 1941

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A NEW ERA

in the

Terminal Elevator Industry



Putting his finger on many points worthy of consideration, SOGES Vice President Gilbert P. Lane didn't pull any punches in placing all the blame right where it belongs in this Toledo address. Plant Manager of Arcady Farms Milling Company, Riverdale, Ill., Mr. Lane "brought down the house" with these remarks:

Mr. Chairman,
Members of the
Grain & Feed Deal-
ers National Asso-
ciation, Honored Guests, and Associates:

MY presence here as good will ambassador Number 4 is for the express purpose of extending to each of your plant superintendents personally, through you, an invitation to attend our convention being held in Omaha, April 2-3-4, this coming Spring. Attending one of our conventions will really put new blood into their veins and will represent just about the best investment any of you have made in years, so take a tip from the Society's Number 1 "dollar-a-year" man and streamline your superintendents!

In addition to our annual convention being interesting and educational to all in the industry, the reception committee at Omaha is going to "do itself proud" in showing us the town, as for example, Toledo's good mayor, John Q. Public, I mean Carey, did in showing me about upon my arrival here early Sunday.

We came to one very interesting monument. It was peculiarly shaped—like a grain elevator, and bore the inscription, "Here lies the body of a G. E. Superintendent and an honest man."

Imagine my amazement! I was spellbound and flabbergasted because in Chicago we only put one man in a single grave. Before going further let me state that the following remarks are purely fictional and any resemblance, real or fancied, to persons, institutions, graves, or tombstones, alive or dead, is entirely coincidental.

After a very careful study of my subject—a life-time of experience and observation all during a summer I spent in Toledo, Ohio, in 1924—I have arrived at the extraordinary conclusion that one of the most significant cogs in the terminal elevator industry is the elevators themselves.

For Supers' Comfort

AFTER policing the industry thoroughly one week-end in the company of Kent Keilholtz and Bert Boardman, I find that grain elevators are structures of a million and nineteen different types of architecture. These strangely-shaped contraptions are often surrounded by groups of tanks. After consulting several thousand of the owners I find that they have been built for the express purpose of providing a place for Superintendents, who like that character in ancient mythology are destined forever to hang suspended between Chicago and Toledo, Ohio—I mean between Heaven and Hell; there to while away the day smoking their corncob pipes which have been carefully filled with finely-cut worn-out elevator buckets and granulated rubber belts.

But let us peek through the clouds of sweet, sweet dust and see for ourselves just what goes on in these cogs—the plain, unadorned, non-shel-lacked, unvarnished, nude truth.

As I was searching the archives of our Association in the Chicago Board of Trade for the data which I am about to give you, a beautiful young lady stepped into the office and asked the new boy at the information desk if the secretary, Mr. Dean Clark, were in, whereupon the boy stated that Mr. Clark had just left for lunch with his "frau." The lady caller said, "When he gets back with his lady friend tell him that his wife called"—which reminds me of a good way to prevent nose bleeding. They say you should keep your nose out of other people's business, so I shall proceed with my talk.

Switching

REGARDING switching service at an elevator, much has been said—in both English and profane . . . mostly profane. There seems to be a well organized movement in railroad circles to give the elevators the least amount of service at the greatest inconvenience possible to the Superin-

tendent. For instance, he orders a switch for 9 a. m., knowing at the time that he will not be in a position to handle cars until 10 a. m., but also knowing by previous experience something of railroad service. The yardmaster heartily promises to have the engine there at 9 a. m. or possibly at 8:30 a. m. So far, so good. 8:30 comes and goes. No engine, of course; 9 a. m. shows up but the engine does not. The Super grins; 9:30 finds him still grinning. It will be a half-hour yet before he can handle cars anyway; 10 o'clock arrives and he cocks his ear for the puffing of the engine's exhaust. 10:30 finds his ears not only still cocked but rapidly turning a deep purple. 11 a. m. and he has almost burned up the telephone wires yelling at the yardmaster. That gentleman also has almost burned up some wires giving the Super the standard railroad alibis—a wreck on the main line, a car off the track, a bridge has washed out, and the final "WHY HE LEFT HERE AN HOUR AGO!"

Promptly at 11:35 a. m. the engine puffs leisurely into the yard and the business of switching cars is taken up. The next morning the Super orders the engine for 9 a. m. and the yardmaster heartily promises to have it there by at least 8:30 a. m. . . .

Shoveling

SHOVELING is the method of extracting grain from boxcars. A car is placed in front of an open hopper and a laborer breaks the seal from the hasp, carefully dropping the seal into the hopper. If the hasp sticks at all, he raps it smartly with the crowbar, breaking it off and allowing it to follow the seal. Then he begins to pry open the boxcar door and usually finds it quite a tough job. So, he attaches the shovel rope to the door, kicks in the shovel machine, and stands back while the rope breaks apart and the car gets pulled off the spot.

This is the foreman's cue to bawl out the shoveller and force him to open the door correctly after spend-

ing another twenty minutes finding the crowbar. This the good man does, attacking the splintery grain doors with great vim and vigor and faithfully dropping all chunks of wood and nails into the yawning hopper. The grain begins to flow from the car, relieving the pressure against the remaining doors and thereby allowing the shoveller to drag them out and throw them on the feet of his sleeping partner who is standing right there on the unloading platform.

The partner then opens wide the hopper slide in an effort to choke the belt. Sometimes he succeeds and sometimes he doesn't. The shovels are then hooked up to the repaired cables and the bulk of the grain is unloaded. The few kernels left are then swept up and sacked for the Superintendent's chickens and the brooms dropped into the hopper. When they hit the scale, that unscrupulous but cunning decoy called the weighman, knows the car is finished and balances his bean, I mean beam.

Spouting

SPOUTING grain from the scales to the bins would be a very monotonous job if it weren't for the bin spouts and conveyors on the bin floor. Each scale can reach a great number of these conveyances. This method has been cleverly worked out to make the spoutman's job more interesting; it gives him a wonderful opportunity to run off cars of wheat into corn bins and vice versa.

Let us skip the rest of what goes on in the elevator—it is merely a routine of mixing top soil and screenings efficiently with grain, safeguarding the jobs of Superintendents and Managers, and turn our attention to grain inspection.

Inspection

THE grain industry may well point with pride to the efficient system it has developed in inspecting carlots of grain arriving at the terminal markets. This is, in most cases, an entirely unbiased and impartial inspection of the goods by men appointed by the State. These Samplers and Inspectors are chosen absolutely on their merits. A most intricate and thorough method has been devised for their selection.

For instance, their application and examination papers are carefully gathered up into piles, tied with baby-blue ribbon, and filed away in the furnace. Then the applicant's sponsor is multiplied by the number of votes said applicant can swing in his precinct, and to that figure is added the number of ward committeemen willing to endorse him. If the resulting answer totals sixty or better, the applicant is forthwith hired and sent out a fully authorized sampler or inspector of grain, backed by the prestige and power of a great commonwealth.

Sampling

IN the immense railroad yards of a terminal market, the incoming grain cars are switched out to certain designated tracks. At the crack of dawn the Samplers swoop down on the long strings of loads in this area to get a sample or a reasonable facsimile of each car, and before you can say "Ex-Gov. James Cox" the samples are on the way to the state inspection office.

Occasionally there is a slight delay caused by some forgetful railroad clerk's failure to mark the contents of a car on the carding. This forces the samplers to go into a huddle to determine whether the grain in that un-

marked car is wheat, corn, beans or what-have-you. But by tracing back the memo billing on the car the samplers usually can find out what kind of grain it contains.

(Grain Exchanges also have an official sampling department. The men selected for this work are of a much higher caliber. It is not uncommon to find one occasionally who is a common sewer of good whiskey.)

Every car of grain arriving at a terminal market is inspected and graded by the state inspection department. Getting the samples inspected and over to the trading floor in time for the current day's business requires a vast amount of efficiency and dispatch, but the sponsored inspectors are equal to the task. With rapidity of throwing out ballots at polling places, these agricultural wizards zip through the stack of samples and send them on their way, each tagged with grading factors. Occasionally the Super at an elevator discovers a car that actually checks with his knowledge of grades.

Out-Bound Inspection

IN the outbound inspection of grain, the system is divided into three divisions: Merit Grading, Wife Grading, and Bar Grading. The first division, Merit Grading, is simply the procedure of grading grain on the merits of the Inspector. If he happens to be versed in wheat classes, you may be fairly certain that he will knock out your cars on class. If he fancies himself an expert on blighted barley, you will discover that you have not a bushel of good barley in your house.

The second division, Wife Grading, is a rather difficult one for the Super. It means that Mrs. Inspector bawled out Mr. Inspector more than usual that morning and as a perfectly logical sequence, no grain loaded that day possibly could grade.

Bar Grading finally gives the Super a break, for this division applied to those days—God bless 'em!—that the inspector visits several bars before arriving at the elevator. He then can't understand how the Super manages to hang onto his job when he is continually loading out One Yellow Corn for Two Yellow!

Over all branches of inspection spread the beneficent wings of the U. S. Department of Agriculture. In a kindly and paternal manner, this bureau patiently endures the escapades and rowdyisms of the grain trade and quietly works toward the day when all grain will be mixed from bins in one-grain lots and graded under a microscope. In that beautiful day to come, the numbskulls who now handle grain so ignorantly will become enlightened under the guidance of the dear old U.S.D.A. Inspection Department. Then, a new era will dawn. Until then, the trade will have to hobble along as best it can with its silly old fashioned idea of merely satisfying its customers.

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Diesel Power

By BERNARD SNARANBERGER
Fairbanks, Morse & Co., Minneapolis

Before the Society of Grain Elevator Superintendents

THE eyes of the world today are focused on Diesel power. You hear it discussed everywhere, yet in listening to the discussion of Diesels the fact is borne home to you that the average person's conception of the Diesel engine is that it is a new invention on the market—something that has just been discovered. In one sense of the word that is true—it has just been discovered. This discovery has come about mainly through the adoption of Diesel engines by the railroads, and the front page publicity that has resulted from their use by this industry.

The thousands of people riding Diesel trains know that the train is being propelled by Diesel engines but they don't know the principles of this engine, or even what its external appearance is like, nor do they realize that this type of power has been available to the public for over forty years. With all of the Diesel trains that are in operation today, the number of engines used by the railroads represent a very, very small percentage of the Diesels used in other industries. There were two million horsepower in Diesel engines sold in 1936, and this is four times the amount of horsepower sold in any previous year, representing almost one-third of the total horsepower of Diesels installed at the present time on the American continent.

Principles Not Complicated

NOW, for fear that some of my readers may be laboring under the impression that a Diesel engine is an intricate piece of machinery, difficult to handle, etc., I am going to attempt to explain the principles of the Diesel engine:

The Diesel is a member of the internal combustion engine family so suppose we compare it with the automobile engine. The automobile engine has a carburetor where the gasoline and air are mixed as a vapor which is drawn into the cylinder on the downward stroke of the piston, on the upward stroke of the piston this explosive mixture is compressed and as the piston reaches the top of its stroke the mixture is fired by the electrical ignition system. The sudden expansion caused by the explosion acts on the piston to drive it downward, and power is delivered to the crankshaft. The next upward stroke of the piston forces the burned gases out through the exhaust valves and on the next downward stroke a fresh charge of gas and air is drawn into the cylinder.

Thus there are two revolutions of the crankshaft, or four strokes of the engine for each explosion, hence the term "Four Stroke Cycle Engine."

Now, when your automobile engine is on its compression stroke it generally heats in the cylinder. (You have possibly noticed this generation of heat in the air compressor in your elevator.) The higher your compression pressure in the cylinder, the higher the temperature of the air in the cylinder. If the compression pressure is too high the gas mixture will ignite from this heat before your spark plugs function. This is termed "pre-ignition," and since this pre-ignition occurs before the piston has passed dead center you have a violent knocking in your engine. It is for this reason that the compression pressure in gasoline engines is limited to a point well below the ignition temperature of your gasoline.

Heat Replaces Spark Plugs

THIS is where your Diesel engine differs from your gasoline engine. The Diesel makes use of this temperature rise caused by compression, to ignite the fuel. The piston in the Diesel moves upward and compresses air only to a degree of about 560 pounds per square inch. Compressing this air to 560 pounds pressure causes the temperature in the cylinder to rise to approximately 1000° F. just about the time the piston reaches the end of its upward stroke, fuel is injected through nozzles in an atomized form at a pressure of 2500 pounds—combustion occurs automatically. There is no sudden explosion as in your gasoline engine, but there is a slow burning of your fuel on the full downward stroke, delivering power to your crankshaft.

An indicator card taken on a Diesel engine looks very much like a steam engine card, whereas, a card taken on a gasoline engine cuts off immediately.

Diesel engine design falls into four general classifications: Four cycle air injection; four cycle solid injection; two cycle air injection, and two cycle solid injection.

The four cycle principle is, of course, the same as the automobile engine with a power impulse every other revolution. The two cycle principle eliminates the use of valves and substitutes the use of a scavenging pump to expel the burned gases and to introduce fresh air for compression. The advantage of this construction is the fact that you have a power im-

pulse every revolution, and in accomplishing this it is possible, with the same bore and stroke, to obtain the same horsepower output with one-half the mean effective pressure. This means smoother operation of the engine and fewer stresses and strains set up internally, hence less wear and tear and fewer repairs.

As to air injection and solid injection, practically all engines today use solid injection principle, so we have, as a result of thirty-five years experience, two major types of Diesels—the four cycle solid injection predominating on the smaller sizes up to about two hundred horsepower, and the two cycle solid injection being the favorite in the larger units from two hundred horsepower on up.

Where You Can Save

HOW is this power applied to a terminal elevator and why? If your elevator is of the older type where your machinery is all operated through lineshaft and countershaft, then any mechanical drive may be used, such as a flat belt, rope drive, solid chain drive, or (where the shaft speed permits) direct connection.

If your elevator is electrified with individual drive motors then you want a Diesel electric unit generating your own power. Your modern elevator lends itself to Diesel power very nicely. Your load is not a widely fluctuating load, in fact, there is only about thirty to thirty-five percent variance in your load conditions. Regardless of what operations you are carrying on.

The ideal setup is a two-unit plant where both Diesels are operated in parallel for your heavy operation, and where one unit will take care of night

You've saved
two million lives
... so far!

SINCE 1907, when the fight began, the tuberculosis death rate has been reduced 75%—by people like you buying Christmas Seals. More than two million lives have been saved.

But the battle against this scourge must go on. Tuberculosis still kills more people between the ages of 15 and 45 than any other disease.

Yet it is possible to eliminate completely this enemy of mankind. Our weapons are Research, Education, Prevention, Control—made possible by your use of Christmas Seals. Get them today.



Buy
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load or cleaning load, or when you are only "loading in" or "loading out."

Excess Capacity Unjustified

THE question arises as to how reliable is Diesel power? The management of the industrial plant or elevator buying electrical energy is usually satisfied when a single transmission line carries the current to the plant. Managers realize that there will be line "outages," but are willing to endure this occasional outage, which might be avoided by duplicate transmission lines, rather than pay higher rates for duplicate power facilities. On the other hand, when considering Diesel power, this same management feels that the power plant capacities should be as much as twice the operating load. Experience shows that excess plant capacity is not justified and is not an economic advantage.

As to the question of why Diesels are installed in terminal elevators? They are installed because they represent the most economical source of power that we have today. The thermal efficiency of your smallest Diesel is greater than the thermal efficiency of your largest and most efficient steam plant.

As to whether you should install your own Diesel power plant, depends entirely upon the saving that can be effected in power cost as compared with the present source of power, and the relation of this saving to the investment that will be necessary. Each elevator presents an individual problem, and must be studied with care by someone familiar with both elevator operation and Diesel operation, first to determine the saving in power cost that can be effected, and second, to determine the proper size power unit or units to obtain maximum efficiency and to properly handle the load to which it will be subjected.

SOUND MERCHANTISING AN ESSENTIAL PUBLIC SERVICE UNDER CURRENT CONDITIONS

By E. J. Poag,

Assistant General Sales Manager Dodge Division, Chrysler Corporation

THIS is no time to let down on merchandising!

On the contrary, sound merchandising is more than ever a public service that will elicit a new, eager responsiveness from the customers of every manufacturer and retailer in this hemisphere.

The right kind of merchandising represents to the progressive merchant, his opportunity—his greatest assurance in the changing conditions of today's market.

Practically every commodity that is sold today is expected by the buyer to serve longer, more efficiently, more economically.

The buyer wants to know as much as he can about any product in which he invests his money. Merchandising that gives him all the facts, that enables him to make the best possible investment, is the sound procedure which alone is essential to success under conditions governing current business.

And a purchaser has a right to know definitely if the item he intends to buy has the power, speed, capacity and flexibility for the job he knows the unit must do.

The merchant must study his prospective customer's needs. He must know—and not guess at—the exact size and type of an item and all the equipment the unit must have to do the job in question efficiently, dependably, and to stand up in that particular type of service over the longest possible period of time.

[That is the type of public service that the advertisers in "Grain" have been rendering to our readers for

years. It is the type of merchandising that dovetails with the nation's needs for adequate defense preparations. Unless merchandising is as sound in every respect as the product for which it serves as the medium of distribution, it cannot succeed.—Ed.]

GLIDDEN COMPANY'S MAG

SOYA Products Division of Glidden Company publishes a very attractive magazine for their employees. It's called "The Soybeamer" and contains plant news and gossip, the plant's safety record and standings of the inter-department safety contest, and items of interest and help to the employes. Steve Halac is the editor and we believe along with him that nothing but an employee magazine or newspaper, no matter how small the plant or the paper, builds up such wonderful morale, esprit-de-corps and enthusiasm as the Glidden Company people have.

"HITLER IS IN A CAGE"

GERMANY'S situation so far as fats are concerned is critical now. For a long time now the German people have been rationed. They have been under a strain for a long time. The British blockade is not spectacular but it works night and day. Hitler is in a cage. If he is kept there, his Balkan victories will only hasten his eventual collapse, a collapse that will be largely due to lack of food."—From an address by Secretary of Agriculture Claude R. Wickard (C.B.S., Station WCSC, Charleston, S. C.) on April 19, 1941.

180,000 Sq. Feet of Surface renewed with GUNITE and SURFACITE!



All the cracks in this fine-looking elevator were repaired by forcing tough-bonding Gunite into them at a high pressure.

Then the whole structure was thoroughly waterproofed with an extra thick coating of Surfacite.

For a better than new job, write

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Chicago

Elevator and Conveyor Belts

By R. B. POW

Reliance Grain Co., Ltd., Ft. William, Ont.

THE terminal grain elevators of Canada and the United States rank high in the consumption of rubber conveyor and elevator belting. To stay strictly with the manufacturing practice on this subject would make a short article. We are, therefore, going to deal as well with some of the earlier developments.

When one is considering the early history of grain conveying and elevating, there are no better authorities to consult than Encyclopedia Britannica and Hetzel. We have consulted both of these authorities and want to give them credit for historical information and some of their expressed views used in the preparing of this article.

The first reference to belt conveyors in America is noted in the Miller Guide, published in Philadelphia—1795—described as a broad strip of pliant leather or canvas, receiving material on its upper run and discharging over the end. Up until this time screw conveyors were in use to convey grain and light material products.

Flat belts, sliding in troughs, were used around 1840; but owing to the increase of grain handling and the development of grain elevators or the storage system in 1850, something had to be done to handle the volume.

Troublesome at First

WASHINGTON Avenue grain elevator in Philadelphia, built in 1859-63, used for conveying, two narrow leather belts run parallel with bent iron bars at intervals to form a trough over which was placed a canvas to carry the grain. The conveyors were very troublesome on account of tearing out of the bars and the uneven stretch of the narrow leather belts.

Discovery of hot vulcanization of rubber was made in 1839 by Charles Goodyear of New Haven, Conn. The second important development was the art of compounding. The third step was the art of combining rubber composition with other structural materials such as textiles, to secure a commercial article that combined the benefit of the rubber and the strength and rigidity of the auxiliary material.

The first rubber conveyor belts were installed on the docks in Liverpool, England, in 1865; and in 1866 they installed a system consisting of a skip hoist for elevating the grain, and belts for distributing it. These belts were 18-inch x 2 ply and ran at speed of 450 to 500 F.P.M. They were supported on straight wooden rolls. The

discharge was effected by running the belt through a traveling tripper, which was patented in England in 1866, and in the U.S.A. in 1867.

The improvements made in Liverpool were taken up by American engineers and were used at the Washington Avenue Elevator in Philadelphia, in 1873, and in the designing of a new elevator for the Northern Central R.R. in Baltimore, in 1876. In the latter elevator the conveyor belts were 30-inch x 4 ply rubber and ran at a speed of 550 F.P.M. over straight wooden rolls.

This work in the early Seventies introduced wide rubber belts into the business of handling grain, and for years after that they were generally sold on the reputation of the manufacturer as to quality.

Some Record

SOME of these early conveyor belts were of remarkably good quality, considering the art of manufacture was not well developed. Here are two outstanding records:

When the two galleries on the pier of the Washington Avenue grain elevator were erected in 1873, two 36-inch belts about 800 feet long each were installed. In 1900 the two galleries were torn down and replaced by a single one, twice as long.

A new 36-inch belt was put in and parallel to it a 1600-foot belt made by joining the two old belts together. The new belt lasted seven years. The old belts were still there and in use when the elevator was dismantled in 1916—43 years of service.

The Pennsylvania R.R. "Girard Point" elevator was torn down in 1916. The original 36 x 4 belts, put in in 1882—34 years before—were still in regular use. They were 700 feet long and ran flat, with concentrators at loading points only.

These conveyor belts, you must remember, ran flat and at slow speeds. The load was very light—probably not over 2000 B.P.H.—as against delivery of from 15,000 to 30,000 B.P.H. today.

The belt specifications, as given by the engineers for the Girard Point

elevator, were: "Best quality, smooth surface gum belts"; but as the business grew, the number of belt manufacturers increased and competitive business brought on the market many belts of poor quality. This led to the use of detailed specifications for grain belts.

"Specs" Rigid

HERE are several specifications drawn up by engineering companies such as C. D. Howe Co., Metcalf Co., Carter-Halls-Aldinger Co., and the Stewart Co. The Metcalf specification calls for "Old Spec.—14-lb. friction; New Spec.—18-lb. friction, in 28, 30 and 32-oz. duck." By this is meant a yard of belt duck, which is 36-in. x 42-in., must weigh either 28, 30 or 32 oz. as specified. The tensile strength of the duck must run 350 lbs. to the inch in the direction of the warp.

Both conveyor and elevator belts are made in the rubber covered or friction surface type. By rubber cover is meant the carcass of the belt is protected by 1/40-inch rubber cover.

In other grain conveyor belts built in the U.S.A. up to 1885, the belts were made to give greater capacity by troughing them over idlers of different types, but after years of experimenting with various idlers, designers of belt elevator equipment reached the conclusion that the right way to convey grain was with flat belts, their reason being flat belts have a good contact with the horizontal idler pulleys and will run straight.

Shortly after this, engineers started to experiment with troughed belts and concentrator pulleys were used at the loading points and at intervals along these belts. The first concentrators used were inclined at an angle of 60°, and were later reduced to 45°. These angles were too steep, however, and caused longitudinal cracking of the belt; they were again reduced to 35, 30 and 20°, now in common use in troughed belts.

There has been a big improvement in recent years in conveyor equipment; high grade, anti-friction bearings are used in practically all high class installations. This, of course, has a tendency to greatly increase belt life.

Technique of Manufacture

THIS is a complicated subject. The chemistry of the business is not well understood, although the effect of the various compounding ingredients is well known. There are at least ten kinds of raw rubber in commercial use and a great number of com-



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-and the 3-to-1 choice

Why?

Because it fills every important requisite of the ideal grain fumigant

First-

Freedom from hazard to life or health of those who must handle it, including risk of accumulative injury to lungs or other organs. Because of the importance of this factor, many compounds more effective than those commonly used are barred from practical consideration.



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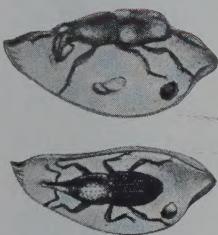
—the dependable grain fumigant of the Grain Trade

Next



— Freedom from danger of inflammability and explosiveness, both in liquid and gaseous form. This requirement involves safety of workers, but it also covers the matter of elevator plant protection. Experienced buyers consider that these safety factors take precedence over any other considerations.

Next



— Freedom from risk of leaving a residual odor or other harmful effect on the treated grain or on the product into which the grain is processed. This is really more important than effectiveness. A firm could better afford to get poor fumigation results than to harm the grain.

Finally



— Effectiveness in killing power, convenience of application and economy of use. An effective kill should protect the grain during the crop season. Convenience includes freedom from having to use cumbersome apparatus. Economy means low unit cost for effective results.

COMPANY

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pounding ingredients for belts alone. These compounding ingredients or powders are not added for the purpose of cheapening or adulterating the compound, but each of them serves the purpose of imparting some specific physical characteristic.

Manufacturers also use several kinds of rubber substitutes, and there are many grades of reclaim rubber used in the business, some of which cost more than certain grades of raw rubber. The knowledge of proper compounding and proper vulcanization to fit belts for the many uses to which they are put comes from long experience and is one of the most valued assets of the belt manufacturer.

Compounding is a necessity because raw rubber does not possess in itself all the qualities needed for the frictioning nor the cover of conveyor and elevator belts. Whether the rubber used is a cheap African rubber or a high grade Para or plantation rubber, it must be compounded to bring out certain qualities which are needed for the use to which the belt is put.

In its original state, when drawn from the tree, rubber is subject to fermentation like other vegetable juices. These processes are arrested by smoking the liquid, or by coagulating it with chemicals, as is done with plantation rubber in the Dutch East Indies, Malaya and Ceylon, where the greatest percentage of rubber comes from.

Strength of Friction No Clue

STRENGTH of friction is in itself no sure index of the quality of the belt. If it were, the plies of fabric might be glued together and show a very high test, but the belt would fail by cracking of the glue. In a similar way a belt can be made with a rubber friction compound that will show a high test when fresh, but will not keep its strength six months. For instance, a low grade friction, doped with rosin or shellac, might show 18 lbs. when fresh, but less than 10 lbs. when a few months old. The adhesion of the friction depends upon care in manufacture as well as on the inherent strength of the rubber compound.

Here are important factors: the openings of the weave of duck, the degree of twist in the threads, the percentage of moisture in the duck when the rubber is pressed into it, the freshness of the friction when pressed together and the freedom of these surfaces from dust and soapstone. All of these factors are under strict control by the best rubber manufacturers.

With the growth of technical knowledge in the belt business there has come greater co-operation between the maker and the user. Specifications for grain belts may vary from time to time, but the standard of quality has been raised. Some engineers, prominent in the business, buy rubber belts on the reputation of the makers

without detailed specifications. Others have written specifications, which in the main are re-statements of the maker's own ratings as to weight and strength of duck, strength of friction and lay-up of plies.

Best of Care Advisable

NO MATTER how good the quality of rubber conveyors or how short a time they are to be kept for use, they are expensive, and it is worth while to give some attention to storage conditions. Oxidation of rubber is promoted by the presence of heat, light and air; therefore, basement rooms are preferable, and the ideal place is a cool dark cellar, protected from frost in-winter and heat in summer. Dry air deteriorates rubber much more rapidly than moist air; although an excess of moisture is not good for belts, as they are made of fabric. Too much moisture will set up a mildew condition in the fabric and the belt will break as it flexes over the idlers. Many belts have gone out of service from mildew.

Belt Fasteners

THERE are several types of metal fasteners on the market, such as Bristol, Crescent Plates, Talcott,



Flexco and Jackson. Most of these fasteners are used with rivets or have the prongs connected with the plate. The rivets are driven through the warp threads and compressed around and clinched on the opposite side.

When there is sufficient take-up, factory-made splices are very satisfactory. This type of splice makes for quiet operation and is easier on the belt and equipment. The most important thing in connection with fasteners is to be sure that both ends of the belt are cut straight. Any of these plate fasteners are satisfactory for conveyors.

Belts to elevate grain came into use earlier than conveyors and were described in Miller Guide—1785, as a leather strap, 4½ inches wide, with buckets strapped on the belt every 15 inches. These buckets were made of willow wood, the face of the strap forming the back of the bucket, and had a capacity of one quart per bucket; holding 300 B.P.H. These elevators, with slight improvements, were installed up to 1830.

In 1842, in the first bulk storage elevator on the Great Lakes, built in Buffalo, leather belts were used to elevate grain at 1,000 B.P.H.

At the Washington Avenue (Phila-

delphia) grain elevator, in 1859-63, 20-inch leather belts, ½ inch thick, were used; and rubber belts came into the picture for grain handling in the early Seventies, and became popular between the Seventies and Eighties.

Quality Belts Demanded

THERE is a growing tendency to rely on the quality which experienced manufacturers build into their regular belts. What the purchaser wants is a grain elevator belt that will last many years without separation of plies. It is not possible to get this by just specifying a certain friction of so many pounds pull, because, as explained previously, high friction test does not necessarily mean a good aging friction.

One of the most important points in frictioning of duck is that the duck be thoroughly dry. This is done by running it over warm heated rolls. The duck is kept in a hot room and taken from the hot room to the calendering machine, which compresses the friction compound into it.

Grain elevator belts are usually built of 32-oz. duck in 6, 7 and sometimes 8 ply. Specifications generally call for rubber cover to protect the belt against moisture. I believe there are a few 8 ply belts operating here in the Fort William-Port Arthur area.

Weight of duck is not in itself a measure of strength or worth of the belt. Those qualities also depend upon the proportion of warp and filler threads, the twist in the threads, the length of the staple, the friction compound; the skill and knowledge of the belt manufacturer in combining these with the right friction and cover, determine the value of the belt for a particular service and its ability to withstand strain, shock and other stresses to which elevator belts are liable.

NEW MILLING PROCESS

AN adaptation of a flotation process long employed in the mining field (to separate gold, silver and other metals from baser elements), for the removal of the outer splintery hull from the wheat kernel so that all the original nutritive elements nature put into wheat are preserved and go into the flour, has been announced by the Continental Baking Co. Mining machinery is used.

"The problem of peeling wheat is one that has puzzled scientists ever since man began to eat wheat thousands of years ago but until now it has never been solved," the report states. "Scientists regard the discovery as notable for several reasons, and it comes at a time when the government nutrition authorities are demanding more, vital elements in our daily bread."

Our diets are more deficient than they were 100 years ago, they say. At least the whole wheat faddists and the white bread advocates may start speaking to one another any time now.

NEW WHEAT WON'T KEEP!

New crop wheat does not possess normal keeping qualities, states Forrest Moyer, Secretary of the Kansas Grain, Feed & Seed Dealers Association. As much as 20% of farm loan stocks are being found either out of condition or threatening to become so. Discount factors on low grade wheat may be expected to increase.

NEW BEAN CROP DAMAGED

New crop beans are damp and there is much damage, reports Fred K. Sale, Secretary, Indiana Grain Dealers Association. "If these beans go into farmers' bins with the moisture they now have, probably few will ever come out in merchantable condition."

TWO MORE TURNS SOUGHT

Two additional turnings on stored grain are being sought by the Southwestern Terminal Elevator Association in preparing a petition changing their Uniform Storage Contract.

PRECARIOUS CONDITIONS ANTICIPATED

"Check up at once on the condition of all grain in your plant," come reports flooding in from all points of the compass. With the kind of weather we have had in the past several weeks, wheat has taken on more moisture than when put into storage. Some cars reaching terminals are suffering penalties of as much as 25c per bushel because of being musty, tough, badly damaged, or "sick." Other grain already in storage is very apt to become "sick," advise our correspondents.

Use only good fumigants, warn others who have been having "bug" troubles. This seems to be a most favorable season for insects.

WEEVILS ENJOYING WHEAT

Wheat in the farmers' bins is being rapidly eaten up by the weevil, reports Fred K. Sale, Secretary, Indiana Grain Dealers Association. "Much of it is already musty, and much of it is 'S-I-C-K'."

Southwestern wheat stored on farms is being inspected at frequent intervals by the CCC, reports A. G. Campbell, Secretary of the Texas Grain & Feed Dealers Association. "And where it is not keeping in good condition the farmer is being required to pay off his loan. This brings wheat to the elevators which can be bought, but which should be watched closely for discount factors."

Summing up the entire situation, Executive Vice President Ray B. Bowden of the Grain & Feed Dealers National Association advises that "there 'may' be some modification in the administration of the AAA Act to give a fairer opportunity for the industry to show their worth. There will be some tendency soon to reduce the size of USDA field offices and AAA administration costs, which admit-



Red flag, with black center, above red pennant indicates storm of great violence approaching, with wind starting in south-east.

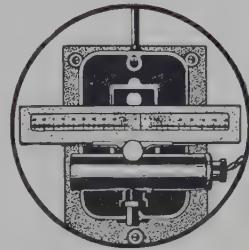
STORM COMING!

Does the *farmer* consult his "rheumatiz" or the breast-bone of a goose to calculate weather conditions? . . . *He does not!* He relies upon the U. S. Weather Bureau forecasts as an aid to safeguarding stock and property. . . . He doesn't guess. *He knows!* . . . And by heeding warning signals he prevents loss, saves time, effort, money. . . . Take a tip from the farmer. Don't guess. *Know!* Install a

ZELENY THERMOMETER SYSTEM

Know beyond all doubt the exact condition of grain in your bins. *Know* whether there is the slightest danger of over-heating, deterioration, damage. *Prevent* loss. . . . Write for complete descriptive matter . . . evidence of the positive protective measure Zeleny provides?

ZELENY THERMOMETER COMPANY
9 SOUTH CLINTON ST.
CHICAGO, ILL.



Precision made, the Zeleny Thermometer System is a Warning that operates with untailing accuracy.

SIGNALS THAT SAVE PROPERTY

tedly are getting out of bounds in places."

WARNS AGAINST POISONOUS FUMIGANTS

One great difficulty experienced until recently has been the shortage of non-poisonous fumigants, according to T. R. Shaw, veteran editor of the Cargill Crop Bulletin published by Cargill, Inc., Minneapolis. "The defense authorities should think twice before insisting on the grain and milling industries jeopardizing the lives of their men by the use of poisonous fumigants," Editor Shaw says. America's Food For Defense project is "rapidly turning into Food For Bugs."

"Statistically the U. S. has one of

the largest productions of all grains in history but has less actual human food this year than statistics show. Daily reports of spoiled wet grain, sprouted, bleached, damaged wheat, insect infested bins and such have become so common that no one can comprehend the tremendous quantities of our so-called food reserves that are daily becoming unfit for human consumption.

"Insect populations have shown tremendous increases, heavy rains have continued on unthreshed grain, storage space is at a premium, and large quantities of all types of grain are temporarily held in unsatisfactory containers; all of which are daily cutting down the statistical position [Concluded on Page 13]

**USERS' EXPERIENCE OVER MORE THAN
SIXTEEN YEARS INDICATES**

**NO Surer WAY TO CONQUER WEEVIL
THAN BY FUMIGATING . . . and NO
MORE EFFECTIVE FUMIGANT THAN**

Larvacide

CHLORPICRIN

This procedure has proved both successful and highly economical . . . because it kills the egg-life and larva within the kernels . . . as well as the adult insects.

GRAIN ARRIVING AND IN TURNING

Treat arriving grain to kill possible infestation from outside. Such infestation is likely to spread through your storage. Grain in turning offers a grand chance for precautionary treatment. Each of these steps is easy, inexpensive and has proved soundly economical.

BIN TOP TREATMENT FOR MOTH CONTROL

Sprinkling a quart or so does a good job in upper levels, including kill of egg-life in kernels. Mask and sprinkler bottle are only equipment needed.

RODENTS

Destroyed by light dosage. Larvacide brings them out of retreats, usually to die on the open floor, whence they are disposed of easily, without carcass nuisance. Regular use of Larvacide in grain work reduces the rodent problem to a minimum, or eliminates it entirely.

WITH LARVACIDE IT'S USUALLY A "ONE TIME" JOB. THE EXPERIENCE OF MILLERS AND ELEVATOR MEN OVER MORE THAN 16 YEARS PROVES THAT, FOLLOWING AERATION, LARVACIDE HAS NO ILL EFFECT UPON THE MILLING QUALITIES OF GRAIN OR THE BAKING QUALITY AND PALATABILITY OF FLOUR.

Larvacide

CHLORPICRIN

is a tear gas fumigant, shipped in liquid form, in cylinders 25-180 lbs. and 1 lb. bottles, each in safety can, 6 and 12 to wooden case. Stocked in major cities and quickly available. Write for helpful literature on Weevil, Rodent and other Pest Control.

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BOSTON • PHILADELPHIA • OMAHA

FUMIGANT FATALLY POISONS WORKER

Toxic poisoning believed to have been caused by the use of a poison gas in fumigating federal corn storage bins killed Herbert L. Burgus, 42, on October 8th. Pending the complete investigation of his death, the Iowa AAA office ordered a stop to all fumigating. The deceased was experienced in fumigation work.

Mr. Burgus immediately became acutely ill upon emerging from one of the CCC bins and reported to his assistant that he had inhaled a whiff of the gas. Before a physician could attend him at his home, Mr. Burgus became unconscious . . . and death came a short time later—within three hours after the gas was inhaled, say reports.

A new type of fumigant—a mixture containing methyl bromide—was being used to kill weevil and other insect pests. Mr. Burgus was wearing a gas mask during his exposure to the gas. Whether the mask was defective or whether he had absorbed the poisonous fumes in some other manner is not known. The mask and canister were sent to Washington, D. C., for inspection as to possible defects. Mr. Burgus is survived by his widow and three sons.

Some time ago we published a warning concerning the use of methyl bromide which pointed out that its use for grain fumigation should be attended by careful preliminary tests on the matter of its health hazard. We now intend to investigate this recent fatality first-hand and will give our readers a full report in our next number.

ATTENTION, PLEASE

Industrial, human, and natural (grain and products) resources MUST be given your utmost protection, reads a mandatory order from the Office of Civilian Defense. As outlined below, this will require special planning in every grain handling and processing plant.

Your planning shall be directed toward two major objectives, namely, (1) prevention of fires, accidents, and willful damage, and (2) minimizing the extent of damage to plant and personnel to the smallest possible proportions if disasters occur.

Each plant will set up its own fool-proof program. A coördinator is to head your Plant Defense Organization, assisted by heads of the four vital Divisions, namely, Fire, Police, Medical, and Maintenance Services. These services are to be manned by carefully selected employees trained individually and in groups for any emergency that may arise. Those selected must be your most competent, as only with the utmost alertness can maximum protection against disruption of normal activities, as well as the safety of personnel, be realized.

Thought, preparation, and training are basic requirements in building and maintaining a Plant Defense Organization. Grain handling and processing plants on this continent may not yet be subjected to indiscriminate sabotage and other war-time disruptions, although some already have, but there are other hazards equally destructive NOW. It takes time to build up such a Defense Organization within your plant to be prepared to meet any emergency, and the Office of Civilian Defense expects your protective program to be inaugurated at once.

We will indulge in no further details of this program at the moment, but if we can assist you in getting further needed information about applying it to your particular plant, just drop us a line.

POISONOUS FUMIGANTS—

[Continued From Page 11]

which in no way reflects the true situation. The loss suffered may not be as great in volume as some anticipate, but the loss in quality will be heavy.

"Our large crop of 961,000,000 bushels of wheat may not seem so large when we consider the amount that has been spoiled by rain and the many small lots that are being destroyed by insects in the farmers' bins. The total crop in figures and the amount suitable for human food are quite different. We should look at facts as well as figures."

EXPECT TIGHTER SUPPLIES

Beginning almost at once, warns Ray Bowden of the Grain & Feed Dealers National Association, expect much "tighter" situation in all materials that are necessary in the U. S. defense effort; perhaps very drastic prohibitions of materials to some lines. New equipment, like new construction, will become increasingly difficult; also increasing difficulty in getting maintenance equipment on some lines.

The grain handling and processing industry, however, seems assured of necessary material for repairs for the storage and preservation of foodstuffs.

The supply of fumigants, very short in recent weeks, is being taken care of as rapidly as production will permit, Mr. Bowden states. As we go to press it seems arrangements are made for sufficient good fumigants to preserve grain stocks, under a plan to be administered and policed by USDA, and without too much red-tape for the user of fumigants (and who isn't using them now?).

PRIORITIES ON REPAIRS

Storage, wholesaling, preserving, milling, refining and refrigerating of food for human consumption or livestock feed commands priorities for repairs, according to OPM. When you need hard-to-get materials for repairs or emergency inventory, your order for the material should include the following endorsement written on the purchase order:

"Purchase Order for Repair or Emergency Inventory — Preference Rating A-10 under Preference Rating Order P-22."

Care must be used, warns the Grain & Feed Dealers National Association, as there is a penalty for misrepresentation when such an order is filed.

NO MORE CERTIFICATES NEEDED

No more Certificates of Necessity for building grain storage are to be required by the government, according to recent dispatches.

Further more, the government order for several thousand steel tanks for farm storage has been withdrawn due to the change in the grain storage situation, further purchases being unnecessary at present.

CARLOADINGS HOLDING STEADY

Carloadings of grain and grain products are still well ahead of average, despite a slight pre-holiday slump (October 12th). A glance at the cumulative loadings since January 1st gives a striking comparison. Loadings for the following weeks were:

	1941	1940	1939
Oct. 11.....	36,553	37,274	38,793
Oct. 4.....	40,180	39,388	41,182
Sept. 27.....	40,480	39,392	45,370
Sept. 20.....	44,839	40,943	46,791
Sept. 13.....	45,045	42,494	50,112
Sept. 6.....	36,878	37,254	36,136
Aug. 30.....	43,536	37,333	40,200

Cumulative loadings since January 1st for the same period show an equally striking movement record, to wit:

	1941	1940	1939
Oct. 11.....	1,601,071	1,472,575	1,535,907
Oct. 4.....	1,564,518	1,435,301	1,497,114
Sept. 27.....	1,524,338	1,395,913	1,455,932
Sept. 20.....	1,483,858	1,386,521	1,410,562
Sept. 13.....	1,439,019	1,315,578	1,363,771
Sept. 6.....	1,393,974	1,273,084	1,313,659
Aug. 30.....	1,357,096	1,235,830	1,277,523

For the first 39 weeks of 1938 (ending September 27th) carloadings totaled 1,488,729 in 1938 and 1,321,045 in 1937.

GRAIN EXPORTS UP 541%

A 541% increase in export grain unloadings is reported by the Association of American Railroads during September this year compared with 1940, a total of 3,587 carloads against 633 reached Atlantic, Gulf and Pacific ports.

WHEAT GRINDINGS HIKE

Wheat ground during September really sky-rocketed, reaching 43,247,401 bushels, compared with 39,123,440 during August, and 40,625,412 during July.

CORN GRIND STILL MOUNTING

Each month of late has witnessed a substantial increase in the tonnage of corn ground by the eleven refiners of starches, syrups, sugars and other derivatives of corn for domestic consumption. For September this figure jumped up to 8,719,970 bushels, compared with 8,622,847 last month.

SOYBEAN CRUSHINGS UP 27%

Against 310,070 tons last year, 69 soybean processors crushed 395,238 tons of soybeans in the 3rd quarter of 1941 ending September 30th, states the Bureau of Census. This compares with an average of 171,087 tons by 36 mills for the same period in '37, '38, and '39.

Stocks of beans were 20,714 tons compared with 11,801 on September 30th a year ago, and an average of 15,978 for the three preceding years.

FLAX GRINDINGS SOAR

Flaxseed crushed showed a 175% increase for the third quarter of this year compared with last, totaling 340,889 tons crushed by 38 mills against 194,554 tons by 34 mills in 1940, according to the Director of Census. Stocks of flaxseed at mills



A CONTEST IN WHICH EVERYBODY WINS . . .

YOU might feel that there's no use entering a contest when there are prizes given only to the winners.

You might feel that you haven't a chance to win one of those silver trophies to decorate the office. But this contest is different.

Everybody wins!

Each plant that enters the Society's Fifth Annual Safety Contest enters into a contest that is designed to teach safety through competition. Winning the trophy is beside the point, but reducing the rate of industrial accidents is the vital and the ultimate objective. If by stimulating safety consciousness through this contest, the Society succeeds in avoiding only one accident, then the objective is attained.

For when accidents are avoided, everybody gains. The worker, the employer, the superintendent and the Society all come in for their rewards. Write for details of the contest.

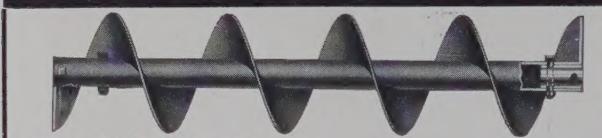
Society of Grain Elevator Superintendents

• Board of Trade

• Chicago

"HAMMOND" Screw Conveyor Systems

OFFER YOU MANY EXCLUSIVE ADVANTAGES FOR PROCESSING AND HANDLING ALL KINDS OF BULK MATERIALS



STREAMLINED HANGERS



Hammond Hangers offer minimum obstruction to flow of materials, also eliminate clogging.

THE "ACE" ANTI-FRICTION COUNTER-SHAFT BOX END



A revolutionary improvement in Screw Conveyor Drives (for wood or steel boxes.)

"NU-HY"

The bucket that offers highest efficiency in elevating granular materials. Guaranteed to increase capacities from 10% to 50%.

A Bucket for Every Elevator Requirement



"NU-TYPE"

Nothing like it for elevating soft stocks or sticky material. Doesn't pack. Discharges clean.

"SALEM"

Long a favorite, still a leader. Manufactured in standard and heavy gauges to handle all types of materials.



Screw Conveyor Corporation

707 HOFFMAN ST.

SCREW CONVEYORS

TRADE MARK REG.



HAMMOND, IND.

ELEVATOR BUCKETS

U.S. PAT. OFFICE

GUARDS NOT ENOUGH

E-I-G-H-T-Y percent of all industrial accidents may be traced directly to L-A-C-K O-F E-D-U-C-A-T-I-O-N, stated William Guibert of the Buffalo (N.Y.) Chamber of Commerce. Only 20% are caused by lack of safeguards.

Plenty of room here for some good safety education by ourselves, eh?

PROTECT THAT MAN

Labor just now is scarce. It is not so easy to replace men these days. Consequently it is a wise employer who sees to it that the possibilities of accidents to his men are reduced to the minimum.

If, owing to carelessness or shortsightedness, a man is hurt and has to lay off for a week or two, how will the loss of this man's service affect your operations? You might be able to replace him but you will have the services of a "green" man who will not be nearly as efficient as your regular employee.

But more important still—the humane aspect. You do not want to see one of your men injured, do you? Well, help prevent such an occurrence. See to it that the accident hazard in your mill is reduced to the minimum.—*Ontario Flour Millers' Association.*

EMPLOYEE ILLNESS COSTS BILLIONS

Laying off work due to illness is costing industry 10 billion dollars annually, Dr. C. O. Sappington told the American Conference on Industrial Health recently.

N-I-N-E-T-Y percent of this loss results from illness of a NON-OCCUPATIONAL origin—the common cold accounting for 35 percent.

NEW HIGH SAFETY RECORD

Boosting its best previous record of 112 days without an accident, the Clinton (Iowa) Company reports that its plant operated from January 14th to July 2nd, inclusive, without any lost-time. The average number of employees working through this period was 1,045, making a total of 998,881 man-hours worked. A 3-foot fall kept this record from hitting the million-hour mark.

WHERE SPARKS ARE KİNDLED

Doubly serious hereafter will be any fires within the industry, for any replacement will necessarily be at the expense of armament work. Timely tips on where to take precautionary steps were pointed out at the October 11th program of Buffalo's AOM Chapter.

Electric motors are responsible for 25% of the fires, according to a film presented this milling group. Bad connections and insufficient or unwise lubrication are contributing factors. Lamps, extension cords, fuse boxes and other electrical apparatus are also potential fire starters. Get a copy of the National Electrical Code and follow it scrupulously, everyone was urged.

Foreign substances in stock—best removed by magnetic or pneumatic devices—account for 12%. Sparks and embers, principally from railroad sidings inadequately protected, cause 10%. Bearings and friction on line shafts and all types of equipment start 10% of all blazes, while spontaneous combustion of various materials provide the heat for approximately 9% more. Matches and careless smoking cause 7% of the losses. Overheating takes a toll of 7%, while open flames used in industrial processes are responsible for possibly another 5%.

INCREASE IN LOOSE MATCHES

Every reader will figure that no one is his own or affiliated crews would think of carrying loose, kitchen-type matches around the plant, in the yards, etc. Sit down and be ready for a shock! A survey shows that the volume of this type of match found in grain has multiplied many, many fold.

It may be that the present situation has only sharpened watchful eyes to this ever-present danger. Regardless, it MUST cease!

The farmer is the first sinner along the line. The country elevator employe is not without suspicion. Perhaps the sub-terminal and terminal



amounted to 346,767 tons on September 30th of this year compared with 197,062 tons last.

CORN INTO GUNPOWDER

Gunpowder will claim considerable qualities of government owned corn within the next few months, according to reports. First turned into alcohol, the "prairie gold" will come out of the co-operating distilleries for producing smokeless powder after having been turned into ether through the treatment with chemicals.

PREMIUM FOR QUALITY WHEAT

For "Certified" and "Grade A" wheat of the Turkey, Kanred and Tenmarq varieties, 91 elevators and mills in 37 counties in Kansas have agreed to pay 2c a bushel premium, according to an announcement made by Dr. John H. Parker, Director, Kansas Wheat Improvement Association, Manhattan. A similar premium plan was used last year by 60 elevators and mills in Kansas.

This premium plan for wheat of the varieties wanted by millers and bakers is relatively new in Kansas, but has been followed for ten years in Indiana, where the crop from inspected fields of approved varieties is known as "premiumized" wheat. A premium of 3c per bushel is paid for this wheat by Igleheart Brothers of Evansville.

SHORT JUNE AND JULY ISSUES

Would you return your June and July copies of GRAIN to our office, Board of Trade, Chicago? The demand far exceeded the supply and we have many requests on hand for all we can garner. Your help will be appreciated. Thank you.

handler is a little more conscious of the hazard involved. BUT what about the others that crawl into the cars you take in or ship out?

Do the samplers know the danger of any type of match around a grain handling or processing plant? If they do not it should be brought to their attention as well as that of their "chief."

Mr. Eugene Arms, Manager of the Mutual Fire Prevention Bureau tells us that the increase in the number of "kitchen-type" matches being reported from all parts of the country,—particularly in shipments out of Western terminal markets is astounding. Here is your chance to take your first defense step in protecting the property, business and lives of both yourself and your customers. DO SOMETHING ABOUT IT T-O-D-A-Y!

COMPENSATION RATES IN JEOPARDY

We would suggest that all our readers on water write their Congressmen for a copy of House Bill 4986, the U. S. Longshoremen's & Harbor Workers' Compensation Act. While some have interpreted it otherwise, the consensus of opinion is that this measure will, if passed, place all employees in a water-side plant under the Act.

Our advices are that compensation rates will probably be trebled as a consequence, due to the high increases in benefits. State laws will be circumvented and the federal laws will take precedence. High Wisconsin rates will look like "pin" money compared to the new premiums under the federal law.

SOGES President, Paul H. Christensen, Van Dusen-Harrington Company, Minneapolis, has already gone to work on this matter, but all the support that can be enlisted will be needed. Do your part T-O-D-A-Y!

SENTIMENT OPPOSES CLOSED SHOP

John Q. Public is opposed to the closed shop by a ratio of approximately 6 to 1, states a recent Gallup poll. Not only that, but the closed shop—requiring every worker to belong to the union before he can be hired—has less public support today than it has had in recent years.

"Declining sympathy for the closed shop follows the general trend of sentiment toward labor unionism," the reports discloses.

Public opinion is rapidly crystallizing on the point that "the closed shop takes away the right of the worker to decide whether he wants to belong to a union. No one should be forced to join a union. That is not the American way of doing things."

MORE ON EXEMPTIONS

Seasonal exemption for employees engaged in the flat warehousing of grain, including rice, in California, Washington, Oregon and Idaho, was granted by the Wage & Hour Division this month, according to Ray B. Bow-

den, Executive Vice President of the Grain & Feed Dealers National Association. Unless an objection is filed the decision will become final on October 28th.

POULTON, RAETHER HONORED

SOGES' able retiring President, Percy C. Poulton, N. M. Paterson & Company, Ltd., Fort William, was presented with an "elegant fountain pen set," to use his own words. "This is something I shall prize and value for the rest of my life and it will constantly remind me of my great interest in the affairs of our Society."

Ed Raether, Superintendent of Buildings, Minneapolis Chamber of Commerce, another able past president, was likewise honored.

Jim Auld, Hales & Hunter Company, Minneapolis Chapter Secretary, delivered this token of appreciation to Mr. Poulton, who, like Past President Raether, becomes a Life Director.

LAST CHANCE

Any suggested revisions in the Venting-Suction provisions recently added to the Dust Explosion Prevention Code of the National Fire Protection Association MUST be prepared for presentation before this committee which will meet in Chicago (Stevens Hotel) on December 1st. If no suggestions come forward then it will be assumed that everyone is satisfied and will comply with its requirements.

GRIMES, HEFFELINGER HONORED

Edward J. Grimes, Vice President of Cargill, Inc., and F. Peavey Heffelfinger, Vice President of F. H. Peavey & Company, were elected President and Vice President, respectively, of the Minneapolis Chamber of Commerce recently. Mr. Grimes succeeds Mr. E. S. Ferguson, Vice President of the Atlantic Elevator Company.

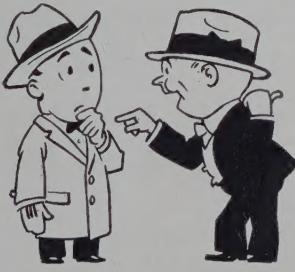
All three of these distinguished grain trade personalities spoke before the SOGES convention in Minneapolis last June.

SOGES SAFETY CONTEST GAINING

More members have enrolled in the SOGES Safety Contest this year than ever before, with one exception, reports M. M. Noxon, Ralston-Purina Company, Minneapolis, Contest Secretary.

"Not only that, but no concerted drive has been launched as yet simply because everyone is so frightfully busy they haven't been doing much corresponding.

"I predict that within ninety days we'll have a quarter of the membership enrolled in this important contest," Mr. Noxon says, in inviting and urging the safety-minded Supers of N. A. to send in their \$5 entrance fee early and avoid the rush. "Better do it today," he asks.



WELCOME
to the
Stock & GRAIN Show
November 29 to December 6

The ATLANTIC HOTEL is a popular place during the annual International Live Stock Exposition. It is not only convenient to downtown Chicago, but is a few steps from direct transportation to the Stock Yards. Grain men and stock men like the friendly service, the delicious food at reasonable prices, and the comfortable rooms.

You'll find your friends stopping here. Come and join them.

• •

**Be sure to make
your reservations
now so that we
can take care of
you in good shape.**

**450 ROOMS
from \$2.25
WITH BATH**

**HOTEL
ATLANTIC**

Chicago

**4 DINING ROOMS
CLARK AT JACKSON**

Visit the new Atlantic Clipper Room.



ARE YOU "Whistling in the Dark?"

Saying something like this to yourself: "Never HAD a dust explosion . . . probably never WILL . . . odds are against it . . . so why should I worry and get all boiled up over nothing?"

Wishful thinking . . . "Whistling in the Dark"! Dust explosions HAVE occurred, WILL occur again. Just when, just where no one can FORETELL. But you can FORESTALL dust explosions, minimize risk and damage with

ROBERTSON SAFETY VENTILATORS

Ninety percent of dust explosions START in the leg, then s-p-r-e-a-d. Robertson Safety Ventilators remove fine dust from elevator leg and, with it, major RISK of explosions. SHOULD an explosion START, it is immediately ushered OUT through vent . . . exhausts itself in the OPEN AIR, thus reducing possibility of disastrous SECONDARY explosions. • Self-operation • Gravity action • Economical, efficient, EVER-PRESENT protection. . . .

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